

**DOCKET FILE COPY ORIGINAL**

Before the  
Federal Communications Commission  
Washington, D.C. 20554

**MAILED**  
**APR 26 2010**  
FCC Mail Room

In the Matter of	)	
	)	
Connect America Fund	)	WC Docket No. <u>10-90</u>
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
High-Cost Universal Service Support	)	WC Docket No. 05-337

### NOTICE OF INQUIRY AND NOTICE OF PROPOSED RULEMAKING

**Adopted: April 21, 2010**

**Released: April 21, 2010**

**Comment Date: (60 days from publication in the Federal Register)**

**Reply Comment Date: (90 days from publication in the Federal Register)**

By the Commission: Chairman Genachowski and Commissioners Copps, McDowell, Clyburn and Baker  
issuing separate statements.

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By the Commission:

## I. INTRODUCTION

1. On March 16, 2010, the Commission released a Joint Statement on Broadband stating that “[t]he nearly \$9 billion Universal Service Fund (USF) and the intercarrier compensation (ICC) system should be comprehensively reformed to increase accountability and efficiency, encourage targeted investment in broadband infrastructure, and emphasize the importance of broadband to the future of these programs.”<sup>1</sup> On the same day, the Commission delivered to Congress a National Broadband Plan recommending that the Commission adopt cost-cutting measures for existing voice support and create a Connect America Fund (CAF), without increasing the overall size of the Fund, to support the provision of broadband communications in areas that would be unserved without such support or that depend on universal service support for the maintenance of existing broadband service.<sup>2</sup>

2. Today’s notice of inquiry (NOI) and notice of proposed rulemaking (NPRM) is the first in a series of proceedings to implement that vision. This proceeding will develop the detailed analytic foundation necessary for the Commission to distribute funds in an efficient, targeted manner that avoids waste and minimizes burdens on American consumers. The NOI seeks comment on whether the Commission should use a model to help determine universal service support levels in areas where there is no private sector business case to provide broadband and voice services. The NOI also seeks comment on the best way to create an accelerated process to target funding toward new deployment of broadband networks in unserved areas, while we are considering final rules to implement fully a new CAF funding mechanism that efficiently ensures universal access to broadband and voice services. Finally, the accompanying NPRM seeks comment on specific common-sense reforms to cap growth and cut inefficient funding in the legacy high-cost support mechanisms and to shift the savings toward broadband communications.

## II. NOTICE OF INQUIRY

### A. Background

#### I. Current High-Cost Support Programs

3. The purpose of high-cost universal service support always has been to help ensure that consumers have access to telecommunications services in areas where the cost of providing such services would otherwise be prohibitively high. The current system of high-cost support has achieved

<sup>1</sup> *Joint Statement on Broadband*, GN Docket No. 10-66, Joint Statement on Broadband, FCC 10-42 (rel. Mar. 16, 2010) at 2.

<sup>2</sup> Federal Communications Commission, *Connecting America: The National Broadband Plan*, (rel. Mar. 16, 2010) (National Broadband Plan) at 144.

considerable success, helping ensure access to affordable voice services in all regions of the nation.<sup>3</sup> However, it was not designed to universalize broadband.<sup>4</sup> Today, federal high-cost support is provided through a complicated patchwork of programs, developed over decades, in which the types of support a carrier receives depends on the size and regulatory classification of the carrier, not the characteristics of the area to which support is directed.<sup>5</sup> Because only voice is a supported service, there is no requirement to provide broadband service to consumers, nor is there any mechanism to ensure that support is targeted toward extending broadband service to unserved areas.<sup>6</sup> Moreover, some of the current high-cost programs do not provide support in an economically efficient manner. For example, eligibility for certain types or levels of support is based on company size or regulatory classification, rather than the cost of serving the area.<sup>7</sup> In addition, several programs provide support based on an incumbent carrier's embedded costs, whether or not a competitor provides, or could provide, service at a lower cost.

4. In the *Universal Service First Report and Order*, the Commission found that “the proper measure of cost for determining the level of universal service support is the forward-looking economic cost of constructing and operating the network facilities and functions used to provide the supported services.”<sup>8</sup> Prior to the Telecommunications Act of 1996,<sup>9</sup> explicit federal universal service support was based on embedded costs. In setting forth the framework for implementing the 1996 Act, the Commission found that “the use of embedded cost to calculate universal service support would lead to subsidization of inefficient carriers at the expense of efficient carriers and could create disincentives for

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<sup>3</sup> The Commission's most recent report on telephone subscribership, released in February 2010, found that the telephone subscribership penetration rate in the United States in 2009 had increased to 95.7 percent – the highest reported penetration rate since the Census Bureau began collecting such data in November 1983. Industry Analysis and Technology Division, Wireline Competition Bureau, *Telephone Subscribership in the United States*, 3 (February 2010) (Telephone Subscribership Report).

<sup>4</sup> See National Broadband Plan at 135.

<sup>5</sup> The federal high-cost support mechanism includes five major components. High-cost loop support provides support for intrastate network costs to rural incumbent local exchange carriers (LECs) in service areas where the cost to provide service exceeds 115 percent of the national average. See 47 C.F.R. § 36.631. Rural incumbent LECs may also receive support under two additional sub-mechanisms in limited circumstances. Carriers may qualify for additional support, i.e., safety net additive support, if they demonstrate significant investment in infrastructure. See 47 C.F.R. § 36.605. Carriers may be eligible for additional support, i.e., safety value support, in instances where they acquire exchanges and invest in that infrastructure. See 47 C.F.R. § 54.305(d). Local switching support provides intrastate support for switching costs for companies that serve 50,000 or fewer access lines. See 47 C.F.R. § 54.301. High-cost model support provides support for intrastate network costs to non-rural incumbent LECs in states where the cost to provide service in non-rural areas exceeds two standard deviations above the national average cost per line. See 47 C.F.R. § 54.309. Interstate access support (IAS) provides support for price cap carriers to offset certain reductions in interstate access charges. See 47 C.F.R. § 54.800-809. Interstate common line support (ICLS) provides support to rate-of-return carriers, to the extent that subscriber line charge (SLC) caps do not permit such carriers to recover their interstate common line revenue requirements. See 47 C.F.R. § 54.901-904.

<sup>6</sup> See National Broadband Plan at 141.

<sup>7</sup> Small carriers typically receive considerably more per-line support than larger carriers serving high-cost geographic areas.

<sup>8</sup> See *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, 12 FCC Rcd 8776, 8899, para. 224 (1997) (*Universal Service First Report and Order*) (subsequent history omitted).

<sup>9</sup> Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996 Act). The 1996 Act amended the Communications Act of 1934. 47 U.S.C. § 151, *et seq.* (Communications Act or Act).

carriers to operate efficiently.”<sup>10</sup> In 1997, the Commission determined that, initially, the larger, i.e., “non-rural,” carriers, such as the Regional Bell Operating Companies, would transition to receiving support based on forward-looking economic cost, and that the smaller, i.e., “rural,” carriers, would gradually shift to a support system based on forward-looking economic cost after further review.<sup>11</sup> Subsequently, in 2001, the Commission adopted modified embedded cost support rules for rural carriers pending more comprehensive reform.<sup>12</sup> As a consequence, only non-rural high-cost support is based on forward-looking economic cost, as determined by the Commission’s voice telephony cost model.<sup>13</sup>

## 2. The Commission’s Hybrid Cost Proxy Model

5. In 1997, the Commission adopted ten criteria to be used in estimating the forward-looking economic cost of providing universal service in high-cost areas and thereby ensure economically efficient levels of support.<sup>14</sup> For example, the “technology assumed in the . . . model must be the least-cost, most-efficient, and reasonable technology for providing the supported services that is currently being deployed.”<sup>15</sup> Because existing incumbent local exchange carrier plant in a particular area may not reflect forward-looking technology or design choices, the costs estimated by the model “must not be the embedded cost of the facilities, functions, or elements.”<sup>16</sup> Instead, the model “must be based upon an examination of the current cost of purchasing facilities and equipment.”<sup>17</sup> To reflect the economies of scale associated with the provision of multi-line business, special access, and private lines, the model “must estimate the cost of providing service for all businesses and households within a geographic

<sup>10</sup> *Universal Service First Report and Order*, at 8901, para. 228.

<sup>11</sup> *Id.* at 8889, paras. 203-204.

<sup>12</sup> See *Federal-State Joint Board on Universal Service, Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers*, CC Docket Nos. 96-45, 00-256 Fourteenth Report and Order and Twenty-Second Order on Reconsideration, Report and Order, 16 FCC Rcd 11244, 11248, para. 8 (2001) (*Rural Task Force Order*). Based on the Rural Task Force proposals, the Commission adopted modified embedded cost rules to provide support to rural carriers for a five-year period. Over the next few years, the Commission had planned to develop a “long-term universal service plan for rural carriers that is better coordinated with the non-rural mechanism,” and “that better targets support to carriers serving high-cost areas.” *Id.* The Commission stated that “in developing a long-term universal service plan that better targets support to the highest cost rural areas, we intend to consider all options, including the use of forward-looking costs, to determine appropriate support levels for both rural and non-rural carriers.” *Id.* at 11310, para. 170. The Commission further indicated that, although it believed that distinct rural and non-rural mechanisms were appropriate at that time, two distinct mechanisms might not be viable in the long term. *Id.* In 2004, the Commission asked the Joint Board to review the Commission’s rules regarding high-cost support for rural carriers and to determine the appropriate rural mechanism to succeed the five-year plan adopted in the *Rural Task Force Order*. See *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Order, 19 FCC Rcd 11538 (2004) (*Rural Referral Order*). Although the Commission originally intended that the rules adopted in the *Rural Task Force Order* would remain in place for five years, the Joint Board had not completed its review and recommendations by 2006. The Commission extended those rules until such time that it “adopts new high-cost support rules for rural carriers.” *Federal-State Joint Board on Universal Service; High-Cost Universal Service Support*, CC Docket No. 96-45, WC Docket No. 05-337, Order, 21 FCC Rcd 5514, 5515, para. 2 (2006).

<sup>13</sup> See *infra* para. 6.

<sup>14</sup> See *Universal Service First Report and Order*, 12 FCC Rcd at 8912-16, para. 250.

<sup>15</sup> *Id.* at 8913, para. 250 (criterion one).

<sup>16</sup> *Id.* (criterion three).

<sup>17</sup> *Id.*

region.”<sup>18</sup> To enable all interested parties to review and comment on the model and its inputs, “all underlying data, formulae, computations, and software must be available,” and all underlying data should be verifiable.<sup>19</sup> To provide transparency and flexibility, the cost model “must include the capability to examine and modify the critical assumptions and engineering principles.”<sup>20</sup>

6. Using the ten criteria to provide guidance for selecting a cost model and its input values, the Commission, between 1997 and 1999, developed its current forward-looking economic cost model, called the Hybrid Cost Proxy Model (HCPM), in an open, deliberative process in which industry experts, state commissions, staff of the Federal-State Joint Board on Universal Service, and other interested parties provided valuable assistance.<sup>21</sup> First, the Commission looked at the network design, engineering, and technology issues relevant to constructing a network to provide the supported services and adopted the model “platform,” i.e., assumptions about the design of the network and network engineering, and fixed characteristics such as soil and terrain.<sup>22</sup> Second, the Commission looked at the costs of the components of the network, such as cable and switch costs, plant maintenance expenses, and various capital cost parameters, and adopted the model input values.<sup>23</sup> The Commission developed an extensive record

<sup>18</sup> *Id.* at 8915, para. 250 (criterion six).

<sup>19</sup> *Id.* (criterion eight).

<sup>20</sup> *Id.* (criterion nine).

<sup>21</sup> See, e.g., *Common Carrier Bureau to Post on the Internet Modifications to the Forward-Looking Economic Cost Model for Universal Service Support*, Public Notice, CC Docket Nos. 96-45, 97-160, 14 FCC Rcd 1893 (1998); *Common Carrier Bureau Releases Preliminary Common Input Values to Facilitate Selection of Final Input Values for the Forward-Looking Cost Model for Universal Service*, Public Notice, CC Docket Nos. 96-45, 97-160, 14 FCC Rcd 2372 (1999); *Common Carrier Bureau Releases Preliminary Results Using Proposed Input Values in the Forward-Looking Cost Model for Universal Service*, Public Notice, CC Docket Nos. 96-45, 97-160, 14 FCC Rcd 9648 (1999); *Common Carrier Bureau Releases Revised Spreadsheet for Estimating Universal Service Support Using Proposed Input Values in the Forward-Looking Cost Model*, Public Notice, CC Docket Nos. 96-45, 97-160, 14 FCC Rcd 11313 (1999). The Wireline Competition Bureau was previously named the Common Carrier Bureau. HCPM is available for downloading on the Commission’s Web site at <http://www.fcc.gov/wcb/tapd/hcpm/welcome.html>.

<sup>22</sup> *Federal-State Joint Board on Universal Service, Forward-Looking Mechanism for High-Cost Support for Non-Rural LECs*, Fifth Report and Order, CC Docket Nos. 96-45, 97-160, 13 FCC Rcd 21323, 21330 (1998) (*Fifth Report and Order*). The model platform adopted by the Commission combined elements from each of the three models considered in that proceeding: (1) the BCPM, Version 3.0 (BCPM); (2) the HAI Model, Version 5.0a (HAI); and (3) the Hybrid Cost Proxy Model, Version 2.5 (HCPM). BCPM was submitted by BellSouth, US WEST, Inc., and Sprint. HAI was submitted by AT&T and MCI. HCPM was developed by Commission staff.

<sup>23</sup> *Federal-State Joint Board on Universal Service, Forward-Looking Mechanism for High Cost Support for Non-Rural LECs*, Tenth Report and Order, CC Docket Nos. 96-45, 97-160, 14 FCC Rcd 20156 (1999) (*Tenth Report and Order*), *affirmed*, *Qwest Corp. v. FCC*, 258 F.3d 1191 (10<sup>th</sup> Cir. 2001) (*Qwest I*). In the companion *Ninth Report and Order*, the Commission also adopted the methodology for determining high-cost support for non-rural carriers. *Federal-State Joint Board on Universal Service*, Ninth Report and Order and Eighteenth Order on Reconsideration, CC Docket 96-45, 14 FCC Rcd 20432 (1999) (*Ninth Report and Order*), *remanded*, *Qwest I*, 258 F.3d 1191; *Federal-State Joint Board on Universal Service*, Order on Remand, Further Notice of Proposed Rulemaking, and Memorandum Opinion and Order, CC Docket 96-45, 18 FCC Rcd 22559 (2003), *remanded*, *Qwest Communications Int’l, Inc. v. FCC*, 398 F.3d 1222 (10<sup>th</sup> Cir. 2005) (*Qwest II*); *High-Cost Universal Service Support; Federal-State Joint Board on Universal Service*, FCC 10-56, Order on Remand and Memorandum Opinion and Order (2010) (rel. April 16, 2010) (*Qwest II Remand Order*). The forward-looking cost mechanism takes the costs generated by the cost model, compares statewide average costs to a national benchmark, and provides support to non-rural carriers in those states where the costs exceed that benchmark. This mechanism became effective January 1, 2000. On July 31, 2001, the United States Court of Appeals for the Tenth Circuit affirmed the Commission’s use of the cost model (continued....)

before adopting its high-cost universal service model, including issuing two further notices of proposed rulemaking,<sup>24</sup> providing additional guidance to parties submitting cost models,<sup>25</sup> and conducting several series of workshops on model platform and inputs issues and numerous *ex parte* meetings.<sup>26</sup>

7. The Commission recognized that “the task of establishing a model to estimate forward-looking costs is a dynamic process that will need to be reviewed and adjusted periodically,”<sup>27</sup> and that “the model must evolve as technology and other conditions change.”<sup>28</sup> Although the Commission’s forward-looking economic cost model used to determine non-rural support was adopted more than a decade ago, it has not been comprehensively updated. It estimates the costs of a narrowband, circuit-switched network that provides “plain old telephone service,” whereas today’s most efficient providers are constructing fixed or mobile networks that are capable of providing broadband as well as voice services. Not only are the model inputs out-of-date, but the technology assumed by the model no longer reflects “the least-cost, most-efficient, and reasonable technology for providing the supported services that is currently being deployed.”<sup>29</sup>

8. Today, a significant portion of current high-cost support is provided to both incumbent telephone companies and competitive telephone companies based on an incumbent carrier’s embedded costs, regardless of whether a competitor could provide service at a lower cost. In 2009, the Commission

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and deferred to the Commission’s expertise in establishing the cost model’s technical specifications. See *Qwest I*, 258 F.3d at 1205-06.

<sup>24</sup> See *Federal-State Joint Board on Universal Service, Forward-Looking Mechanism for High-Cost Support for Non-Rural LECs*, Further Notice of Proposed Rulemaking, CC Docket Nos. 96-45, 97-160, 12 FCC Rcd 18514 (1997) (1997 Further Notice); *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, *Forward-Looking Mechanism for High-Cost Support for Non-Rural LECs*, Further Notice of Proposed Rulemaking, CC Docket No. 97-160, FCC 99-120 (rel. May 28, 1999), 64 Fed. Reg. 31,780 (June 14, 1999) (1999 Further Notice).

<sup>25</sup> See, e.g., *Guidance to Proponents of Cost Models in Universal Service Proceeding: Customer Location and Outside Plant*, Public Notice, CC Docket Nos. 96-45, 97-160, 12 FCC Rcd 18340 (1997); *Guidance to Proponents of Cost Models in Universal Service Proceeding: Switching, Interoffice Trunking, Signaling, and Local Tandem Investment*, Public Notice, CC Docket Nos. 96-45, 97-160, 13 FCC Rcd 5884 (1998); *Common Carrier Bureau Requests Further Comment on Selected Issues Regarding the Forward-Looking Economic Cost Mechanism for Universal Service*, Public Notice, CC Docket Nos. 96-45, 97-160, 13 FCC Rcd 9346 (1998); *Common Carrier Bureau Seeks Comment on Model Platform Development*, Public Notice, CC Docket Nos. 97-160, 13 FCC Rcd 21680 (1998).

<sup>26</sup> See, e.g., *Weekly Meetings on Forward-Looking Cost Mechanism for Universal Service Support*, Public Notice, CC Docket Nos. 96-45 and 97-160, 12 FCC Rcd 22481 (1997); *Workshops on Forward-Looking Cost Mechanisms for Universal Service Support for Non-Rural Carriers, September 3 and September 11, 1997*, Public Notice, CC Docket Nos. 96-45 and 97-160, 13 FCC Rcd 4276 (1998); *Common Carrier Bureau to Hold Three Workshops on Input Values to be Used to Estimate Forward-Looking Economic Costs for Purposes of Universal Service Support*, Public Notice, CC Docket Nos. 96-45, 97-160, 13 FCC Rcd 23728 (1998).

<sup>27</sup> *Fifth Report and Order*, 13 FCC Rcd at 21330, para. 13.

<sup>28</sup> *Tenth Report and Order*, 14 FCC Rcd at 20170, para. 28. When the Commission adopted the model platform, it delegated to then Common Carrier Bureau (now the Wireline Competition Bureau) (Bureau) the authority to make technical changes “as necessary and appropriate” on an ongoing basis to ensure that the model operates as the Commission intended. See *Fifth Report and Order*, 13 FCC Rcd at 21330, para. 13. Pursuant to this delegated authority, the Bureau has made technical changes to the model platform and limited changes to the input values, such as updating annual line counts. The Bureau last updated the lines used in the model to estimate costs in 2003 (using year-end 2002 lines), and non-rural high-cost support has been based on these cost estimates since 2004.

<sup>29</sup> *Universal Service First Report and Order*, 12 FCC Rcd at 8913, para. 250 (criterion one).

disbursed almost \$4.3 billion in high-cost support, of which \$331 million was calculated on the basis of forward-looking costs.<sup>30</sup>

### 3. National Broadband Plan

9. On March 16, 2010, the Commission delivered to Congress the National Broadband Plan, which recommends the creation of a Connect America Fund to address the broadband availability gap in unserved areas and to provide any ongoing support necessary to sustain service in areas that require public funding, including those areas that already may have broadband.<sup>31</sup> The National Broadband Plan recommends that the Commission direct public investment toward meeting an initial national broadband availability target of 4 Mbps of actual download speed and 1 Mbps of actual upload speed.<sup>32</sup> The National Broadband Plan used an initial target of 4 Mbps actual download speed and 1 Mbps of actual upload speed to develop an analysis of the number of people that lack access to broadband capability today. The National Broadband Plan estimated that 14 million people living in seven million housing units in the United States currently do not have access to terrestrial broadband infrastructure capable of meeting this target, described as “the broadband availability gap.”<sup>33</sup>

10. The National Broadband Plan states that the Commission’s “long range goal should be to replace all the legacy High-Cost programs with a new program that preserves the connectivity that Americans have today and advances universal broadband in the 21<sup>st</sup> century.”<sup>34</sup> Specifically, the National Broadband Plan recommends that the Commission create a new Connect America Fund, and that the CAF should adhere to the following principles: (1) “CAF should only provide funding in geographic areas where there is no private sector business case to provide broadband and high-quality voice-grade service;” (2) “There should be at most one subsidized provider of broadband per geographic area;” (3) “The eligibility criteria for obtaining broadband support from CAF should be company- and technology-agnostic so long as the service provided meets the specifications set by the FCC;” (4) “The FCC should identify ways to drive funding to efficient levels, including market-based mechanisms where appropriate, to determine the firms that will receive CAF support and the amount of support they will receive;” and (5) “Recipients of CAF support must be accountable for its use and subject to enforceable timelines for achieving universal access.”<sup>35</sup> In addition, the National Broadband Plan recommends that the Commission “create a fast-track program in CAF for providers to receive targeted funding for new broadband construction in unserved areas,”<sup>36</sup> and create a Mobility Fund “to provide one-time support for deployment of 3G networks, to bring all states to a minimum level of 3G (or better) mobile service availability.”<sup>37</sup>

### 4. The National Broadband Plan Model

11. The National Broadband Plan concludes that private investment alone is unlikely to extend broadband in some areas of the country with low population density. In particular, “[b]ecause service providers in these areas cannot earn enough revenue to cover the costs of deploying and operating

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<sup>30</sup> Universal Service Administrative Company 2009 preliminary disbursement data.

<sup>31</sup> See National Broadband Plan, at 135.

<sup>32</sup> *Id.*

<sup>33</sup> *Id.* at 136.

<sup>34</sup> *Id.* at 145.

<sup>35</sup> *Id.* (footnotes omitted).

<sup>36</sup> *Id.* at 144.

<sup>37</sup> *Id.* at 146.

broadband networks, including expected returns on capital, there is no business case to offer broadband services in these areas.”<sup>38</sup>

12. To estimate the amount of additional funding required to close the broadband availability gap, Commission staff developed an economic model to estimate the level of additional funding that would be required to extend broadband service to the estimated 7 million housing units that presently are unserved by broadband that provides 4 Mbps actual download speed, 1 Mbps upload speed, and acceptable quality of service for the most common interactive applications.<sup>39</sup> First, Commission staff developed a baseline of the current state of broadband availability and infrastructure deployment throughout the nation, which included all the major types of terrestrial broadband infrastructure as they are deployed today, and as they likely will evolve over the next three to five years without public support.<sup>40</sup> Because the Commission does not presently have access to a comprehensive data set, at the required level of geographic granularity, regarding availability (i.e., which people have access to what services) and infrastructure (i.e., which people are passed by what types of network hardware), Commission staff combined several data sets and supplemented nationwide data with the output of a large multivariate regression model. Staff then used this regression model to predict availability by speed tier and to fill gaps, especially last mile gaps, in the infrastructure data.<sup>41</sup> Second, building on the infrastructure data, known and inferred, Commission staff’s economic analysis calculated the incremental forward-looking cost of upgrading or extending existing infrastructure to provide broadband service consistent with the national broadband availability target, and the incremental revenues that might be expected to be generated by the network upgrades. From this, they calculated the net present value (NPV) of the gap between incremental costs and expected incremental revenues of broadband deployments in unserved areas. This NPV represents the amount of additional funding necessary to upgrade or extend existing infrastructure to the level necessary to support the target (4 Mbps download/1 Mbps upload).<sup>42</sup> Underlying the economic model is the principle that only profitable business cases will induce incremental network investments and the best measure of profitability is the net present value of a build.<sup>43</sup>

## B. Discussion

13. The National Broadband Plan recommends establishing the CAF to support universal access to broadband and voice services, including providing any ongoing support necessary to sustain service in areas that already have broadband because of the existing high-cost universal service program.<sup>44</sup> As a first step in comprehensive universal service reform, we seek comment on three discrete groups of issues. First, we seek comment on use of a model as a competitively neutral and efficient tool for helping us to quantify the minimum amount of universal service support necessary to support networks that provide broadband and voice service, such that the contribution burden that ultimately falls on American consumers is limited. Second, we seek comment on potential approaches to providing such targeted funding on an accelerated basis in order to extend broadband networks in unserved areas, such as a competitive procurement auction. Third, in the accompanying NPRM, we seek comment on specific

<sup>38</sup> *Id.* at 136.

<sup>39</sup> Omnibus Broadband Initiative, The Broadband Availability Gap (OBI Technical Paper No. 1) at 1-3 (OBI, The Broadband Availability Gap); *see* Appendix C.

<sup>40</sup> *Id.* at 1.

<sup>41</sup> *Id.* at 1-2.

<sup>42</sup> *Id.* at 2-3.

<sup>43</sup> *Id.* at 1.

<sup>44</sup> National Broadband Plan at 144.



proposals to cap and cut the legacy high-cost programs and realize savings that can be shifted to targeted investment in broadband infrastructure.<sup>45</sup> We encourage input from Tribal governments on all of these issues, and specifically ask whether there are any unique circumstances in Tribal lands that would necessitate a different approach.<sup>46</sup> Similarly, we request comment on whether there are any unique circumstances in insular areas that would necessitate a different approach.

### **1. Model**

14. We specifically seek comment on whether the Commission should use the National Broadband Plan model as the starting point for developing a cost model, or alternatively a cost/revenue model, to use in determining future support for broadband-capable networks that provide voice service. We seek comment on whether the analysis and economic model that Commission staff used to estimate the broadband availability gap in unserved areas provides a useful foundation for calculating the support levels needed for the CAF in a way that minimizes waste, fraud and abuse. We also seek comment on what modifications to the National Broadband Plan model would be required if the CAF is eventually to replace all of the legacy high-cost programs.

15. A detailed description of the National Broadband Plan model, The Broadband Availability Gap, is found in Appendix C and is available on the Commission's Broadband.gov Web site.<sup>47</sup> Additional model documentation includes technical documentation of how the model is constructed and more detail about the statistical model used to estimate availability and network infrastructure in areas where no data are available, which also will be available on Broadband.gov. A public notice will be released shortly regarding a workshop to discuss the technical paper.

16. Commenters are invited to comment on any aspect of the National Broadband Plan model that may be relevant to our consideration of how to reform the existing universal service support mechanisms. We highlight below only selected details relating to the National Broadband Plan model methodology, and specifically seek comment on several threshold design principles the Commission may consider before issuing a further notice of proposed rulemaking in this proceeding.

#### **a. Use of a Model**

17. We seek comment on whether the Commission should develop a nationwide broadband model to estimate support levels for the provision of broadband and voice service in areas that are currently served by broadband with the aid of legacy high-cost support, as well as areas that are unserved. A federal model could provide a more uniform and equitable basis for determining support than

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<sup>45</sup> See *infra* section III.

<sup>46</sup> For the purposes of this NPRM, we define "Tribal lands" as any federally recognized Indian tribe's reservation, pueblo or colony, including former reservations in Oklahoma, Alaska Native regions established pursuant to the Alaska Native Claims Settlement Act (85 Stat. 688), and Indian allotments. The term "Tribe" means any American Indian or Alaska Native Tribe, Band, Nation, Pueblo, Village or Community which is acknowledged by the Federal government to have a government-to-government relationship with the United States and is eligible for the programs and services established by the United States. See *Statement of Policy on Establishing a Government-to-Government Relationship with Indian Tribes*, 16 FCC Rcd 4078, 4080 (2000). Thus, "Tribal lands" includes American Indian Reservations and Trust Lands, Tribal Jurisdiction Statistical Areas, Tribal Designated Statistical Areas, and Alaska Native Village Statistical Areas, as well as the communities situated on such lands. This would also include the lands of Native entities receiving Federal acknowledgement or recognition in the future. Although Native Hawaiians are not currently members of federally-recognized Tribes, we also seek comment on whether there are any unique circumstances that would warrant an alternative approach in Native Hawaiian homelands.

<sup>47</sup> See <http://www.broadband.gov/plan/broadband-working-reports-technical-papers.html>.

individual carrier cost studies or models submitted by interested parties.<sup>48</sup> A uniform federal model could provide a mechanism for determining support levels based on the geographic characteristics of the areas served, rather than the regulatory classification of the incumbent telephone company that serves the area.

18. One assumption underlying the National Broadband Plan's estimate of the level of public support needed to fill the broadband availability gap is that "whenever possible, a market-based mechanism will be used to select which providers receive support," . . . "and that there is competitive interest in receiving a subsidy to extend broadband to an unserved area."<sup>49</sup> One of the principles underlying the creation of the CAF is that the Commission "should identify ways to drive funding to efficient levels, including market-based mechanisms where appropriate, to determine firms that will receive CAF support and the amount of support they will receive."<sup>50</sup>

19. The Commission has previously sought comment on using competitive bidding – that is, using a reverse auction, in which sellers, rather than buyers, compete and the lowest bid wins – to determine high-cost support amounts for voice telephony.<sup>51</sup> It tentatively concluded that "reverse auctions offer several potential advantages over current high-cost support distribution mechanisms."<sup>52</sup> The Commission reasoned that "[i]f a sufficient number of bidders compete in an auction, the winning bid might be close to the minimum level of subsidy required to achieve the desired universal service goals."<sup>53</sup> Similarly, the National Broadband Plan states that "[i]f enough carriers compete for support in a given area and the mechanism is properly designed, the market should help identify the provider that will serve the area at the lowest cost."<sup>54</sup>

20. We seek comment on whether a model would be an important tool, even if the Commission uses a market-based mechanism to identify supported entities and support levels under the CAF. For example, if the Commission uses some form of a reverse auction to determine CAF support levels, it would be important to establish a "reserve price," i.e., a maximum subsidy level that participants would be allowed to place as a bid, because there may be few bidders in certain geographic areas. Depending on the design of the market-based mechanism, reserve prices could play a critical role. A reserve price that is set too low is likely to discourage bidders from participating, while one that is set too high raises the possibility that too much support will be allocated to a particular area.

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<sup>48</sup> The Commission encourages interested parties to submit such information on the record, however, to assist us in developing an accurate and verifiable federal cost model. The Commission previously concluded that a national forward-looking model would provide a more consistent approach and found that relying on differing forward-looking cost methodologies would prevent meaningful comparisons and provide a less accurate picture of relative forward-looking costs. See *Federal-State Joint Board on Universal Service, Access Charge Reform*, Seventh Report & Order and Thirteenth Order on Reconsideration in CC Docket No. 96-45, Fourth Report & Order in CC Docket No. 96-262, and Further Notice of Proposed Rulemaking, 14 FCC Rcd 8078, 8104, para. 52 (1999).

<sup>49</sup> National Broadband Plan at 137.

<sup>50</sup> *Id.* at 145.

<sup>51</sup> Specific examples of reverse auctions include procurement auctions to identify the party willing to provide a good or service at the lowest cost to the buyer, and auctions to identify the least amount of support needed to induce a party to undertake a certain action.

<sup>52</sup> *High-Cost Universal Service Support, Federal-State Joint Board on Universal Service*, WC Docket No. 05-337, CC Docket No. 96-45, Notice of Proposed Rulemaking, 23 FCC Rcd 1495, 1500 para. 11 (2008) (*Reverse Auctions Notice*).

<sup>53</sup> *Id.*

<sup>54</sup> National Broadband Plan at 145.

21. If we ultimately use some form of market-based mechanism to determine CAF support, we seek comment on whether a model should be used to set reserve prices. Specifically, we seek comment on whether a model would provide advantages over the alternative of using a particular firm's current support levels to set reserve prices. Currently, high-cost support levels for voice telephony are based on statewide or study area average costs.<sup>55</sup> Moreover, high-cost support is based on the incumbent telephone companies' forward-looking or embedded costs to provide voice service, which is not necessarily the same as the costs of an efficient provider of both broadband and voice services. Some areas where broadband is not available today may be unserved because there is insufficient high-cost support available in the area to make a business case for deploying broadband-capable networks. In these cases, setting the reserve price at the current support levels could result in a reserve price that is too low and would not further our goal of extending broadband-capable networks to unserved areas. In other cases, setting the reserve price at current support levels could result in a reserve price that is too high, which would not help us "identify ways to drive funding to efficient levels."<sup>56</sup>

22. In addition to assisting the Commission in setting reserve prices, we seek comment on whether a model could be an important tool in determining appropriate support amounts (for example, in areas where the Commission determines that it is unable to use a competitive bidding mechanism). We also seek comment on the role of a model in identifying the most costly areas to serve, where the Commission may want to consider alternative approaches to providing access to broadband and voice services.<sup>57</sup> For example, the National Broadband Plan's estimate of the \$24 billion broadband availability gap is based on the economics of terrestrial technologies only and on the assumption that satellite capacity in the foreseeable future does not appear sufficient to serve *every* unserved household.<sup>58</sup> The National Broadband Plan estimated that the most expensive 250,000 unserved housing units represent a disproportionate share of the total investment gap – \$14 billion.<sup>59</sup> This represents less than two-tenths of one percent of all housing units in the United States; the average amount of funding for terrestrial broadband per household to close the gap for these units is an estimated \$56,000.<sup>60</sup>

**b. Cost Basis for Support**

23. We seek comment on whether the Commission should base any new CAF support on the forward-looking economic costs of an efficient provider, rather than on historic, embedded costs. Basing support on forward-looking costs is consistent with the Commission's policy adopted in the *Universal Service First Report and Order* that support in high-cost areas should be based on forward-looking economic costs and the Commission's finding that using embedded costs to calculate support would lead

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<sup>55</sup> To the extent that certain types of support may be targeted to wire centers, UNE zones, or disaggregated in some rural study areas, overall support levels are still determined based upon statewide or study area averages.

<sup>56</sup> National Broadband Plan at 145.

<sup>57</sup> See *id.* at 150 (suggesting that the Commission "should consider alternative approaches, such as satellite broadband, for addressing the most costly areas of the country to minimize the contribution burden on consumers across America").

<sup>58</sup> National Broadband Plan at 137. ("While satellite is capable of delivering speeds that meet the National Availability Target, satellite capacity can meet only a small portion of broadband demand in unserved areas for the foreseeable future. Satellite has the advantage of being both ubiquitous and having a geographically independent cost structure, making it particularly well suited to serve high-cost, low-density areas. However, while satellite can serve *any* given household, satellite capacity does not appear sufficient to serve *every* unserved household.") (footnotes omitted).

<sup>59</sup> *Id.* at 138.

<sup>60</sup> *Id.*

to inefficient subsidization of carriers and could create disincentives for carriers to operate efficiently.<sup>61</sup> Using forward looking costs also is consistent with the National Broadband Plan's recommendation that "CAF support levels should be based on what is necessary to induce a private firm to serve an area," and that "[s]upport should be based on the net gap (i.e., forward looking costs less revenues)."<sup>62</sup>

24. In addition, we seek comment on what technology platforms should be included in the forward-looking cost model if the Commission decides to base broadband support on the forward-looking economic costs of an efficient provider. The National Broadband Plan recommended that eligibility for obtaining Connect America Funding "should be company- and technology-agnostic,"<sup>63</sup> which is consistent with the "competitively neutrality" principle adopted by the Commission in the *Universal Service First Report and Order*.<sup>64</sup> The plan recommends that "[s]upport should be available to both incumbent and competitive telephone companies (whether classified today as 'rural' or 'non-rural'), fixed and mobile wireless providers, satellite providers and other broadband providers, consistent with statutory requirements."<sup>65</sup> We seek comment on this proposal to ensure competitive neutrality.

25. Consistent with the principle that eligibility for obtaining CAF support should be technology-agnostic, we seek comment on whether the Commission should develop a model that estimates the costs of all technologies currently being deployed (or soon to be deployed) that are capable of providing voice service and broadband service that meets the national broadband availability target. We also seek comment on how to ensure that any cost model used in conjunction with determining CAF support is capable of identifying the least-cost, most-efficient technology in unserved areas. A forward-looking economic cost model that estimates the costs of various technologies would enable the Commission to identify the least-cost, most-efficient technology currently being deployed, and thereby, provide only as much support as needed to achieve the Commission's goals for universal access.

26. We note, however, that while the costs of providing satellite service do not vary with geography and are fairly easy to identify, at present there is not sufficient satellite capacity to address all of the households that are unserved.<sup>66</sup> Thus we do not believe that we need to include satellite in the model. We seek comment on that view.

27. In defining forward-looking economic cost, we seek comment on the extent to which the Commission should consider any existing plant. We note in this regard that the Commission's forward-looking cost model adopted a "scorched node" approach, which assumed the incumbent LECs' central office (switch) locations as a given, rather than a total green field approach.<sup>67</sup> The National Broadband Plan model assumes existing infrastructure (for example, central office locations, cell towers), and estimates the incremental costs of brown field build outs and estimates green field build only where there is no nearby infrastructure. We seek comment on what existing infrastructure the model should assume.

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<sup>61</sup> See *supra* para. 4.

<sup>62</sup> National Broadband Plan at 145.

<sup>63</sup> *Id.*

<sup>64</sup> *Universal Service First Report and Order*, 12 FCC Rcd at 8801, para. 47 (explaining that "competitive neutrality means that universal service support mechanisms and rules neither unfairly advantage or disadvantage one provider over another, and neither unfairly favor or disfavor one technology over another").

<sup>65</sup> National Broadband Plan at 145.

<sup>66</sup> *Id.* at 137.

<sup>67</sup> See, e.g., *Universal Service First Report and Order*, Appendix J, 12 FCC Rcd at 9435, n. 628 ("A 'scorched node' model is one that models the network using the existing wire centers. A 'greenfield' model, by contrast, does not use the existing wire centers, but models a completely new network, including new wire centers.").

We also seek comment on which nodes are most analogous to a LEC central office in a scorched node approach for different technologies.

28. The Commission has extensive experience modeling the costs of wireline deployment, but prior to the National Broadband Plan proceeding, had not modeled the costs of deploying alternative technologies. Although the National Broadband Plan model includes wireless technologies, Commission staff noted that “[i]t is important to recognize that a wireless network has several layers of complexity that are not found in wireline networks, each of which affect the user experience and, therefore, network buildout costs and the investment gap.”<sup>68</sup> For example, the user experience may be affected by the distance of the user from a cell site, the number of users sharing spectrum within a cell, the characteristics of the terrain, and the capability of end-user devices. We therefore seek comment on what modifications to the National Broadband Plan model, if any, would be appropriate to estimate wireless costs for purposes of universal service support.

29. Commission staff noted that determining the actual cost of a wireless deployment would require a finely calibrated propagation model.<sup>69</sup> However, Commission staff noted that conducting the radiofrequency (RF) propagation analysis in the field that would be required to calibrate such a model would be extremely time-consuming and expensive. According to Commission staff, such analysis is usually undertaken only at the time of an actual build-out, and may still not account for some effects, such as seasonal foliage. We seek comment on whether a propagation model would be required to accurately model the costs of wireless deployment. We also seek comment on the feasibility of developing such a model.

30. In the absence of a finely calibrated propagation model, Commission staff used a combination of approaches to ensure both adequate coverage and sufficient capacity to ensure access to service consistent with the target speed. The maximum cell radius is calculated from target uplink signal strength, with the radius in any given area adjusted for likely terrain-driven signal degradation. Capacity requirements for downlink capacity for the number of modeled end-users in a given cell drive cell splitting as required. Nonetheless, Commission staff concedes that “it is possible that the parameters in an actual network deployment are different from those that we estimated.”<sup>70</sup> We seek comment on the assumptions underlying the parameters that the National Broadband Plan model uses to estimate the costs of a wireless network capable of providing service that provides 4 Mbps actual download and 1 Mbps actual upload capabilities. Is the National Broadband Plan approach an appropriate way to model wireless deployment costs for purposes of determining CAF support?

**c. Types of Models**

**(i) HCPM vs. New Model**

31. We seek comment on whether the Commission should develop a new model for determining appropriate universal service support levels for modern networks, rather than updating and modifying the Commission’s existing HCPM used to determine high-cost support for the provision of voice telephony by non-rural carriers. Although the Commission previously stated that its forward-looking economic cost model should evolve as technology changes,<sup>71</sup> we do not believe that we should use the Commission’s existing model as a starting point in developing a model to estimate CAF support

<sup>68</sup> OBI, *The Broadband Availability Gap* at 66.

<sup>69</sup> *Id.*

<sup>70</sup> *Id.*

<sup>71</sup> See *Fifth Report and Order*, 13 FCC Rcd at 21330, para. 13; *Tenth Report and Order*, 14 FCC Rcd at 20170, para. 28.

levels. Since the Commission adopted its model, much progress has been made in developing computer cost models that estimate the cost of constructing modern networks. For example, in a 2009 notice of inquiry, the Commission sought comment on one such model.<sup>72</sup> More recently, Commission staff utilized CostQuest Associates as a contractor in developing the National Broadband Plan model that estimated the size of the broadband availability gap.

32. The National Broadband Plan model has several advantages over the Commission's existing HCPM that reflect improvements in cost modeling that have occurred within the industry and outside of Commission proceedings over the last several years. For example, the National Broadband Plan model relies on road and other rights-of-way data to route outside plant, which is a more realistic method than the Commission's existing model's use of rectilinear distances.<sup>73</sup> In addition, the National Broadband Plan model estimates the costs of multiple broadband technologies. Although the Commission's existing model could be modified relatively easily to estimate the costs of providing digital subscriber line (DSL) service over shorter copper loops by changing certain input values,<sup>74</sup> HCPM does not estimate the costs of other technologies such as wireless, hybrid fiber-coaxial cable, or fiber-to-the-premises, whereas the National Broadband Plan model does. The National Broadband Plan model also includes the costs of so-called "middle mile" facilities, whereas the only transport costs that HCPM estimates are the incumbent LECs' inter-office transport costs. We seek comment on whether the National Broadband Plan model is a better starting point for developing a broadband cost model than the Commission's existing HCPM. We seek comment on what other models we should consider if the Commission determines that it should develop a new model.

#### (ii) Total Costs vs. Incremental Costs

33. We seek comment on using a forward-looking economic cost model to determine support for broadband that estimates the total costs of broadband-capable networks, rather than the incremental costs of upgrading or extending existing networks to provide broadband in unserved areas. As noted above, the National Broadband Plan model identifies "unserved areas," i.e. areas without infrastructure that is capable of delivering broadband service meeting the national target, and estimates the incremental cost of augmenting existing infrastructure to provide broadband using various technologies. As discussed more fully below, the National Broadband Plan model estimates not only the incremental costs of deploying broadband to unserved areas, but also the expected incremental revenues associated with the new broadband deployment.<sup>75</sup> The National Broadband Plan model, however, does not take into account universal service support received under the current high-cost programs for those unserved areas. Rather, the National Broadband Plan model estimates only the incremental support amounts needed to deploy broadband in unserved areas and "assumes that existing networks will be available on an ongoing basis"

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<sup>72</sup> See *Federal-State Joint Board on Universal Service, High-Cost Universal Service Support*, CC Docket No. 96-45, WC Docket No. 05-337, Notice of Inquiry, 24 FCC Rcd 4281, 4286-87 (2009) (seeking comment on CostQuest proposal that the Commission adopt an advanced services model for use in a reformed universal service system). See also, Comments of CostQuest Associates, CC Docket Nos. 96-45, 96-98, 99-68, 99-200, 01-92, WC Docket Nos. 03-109, 04-36, 05-337, 06-122 (filed Nov. 26, 2008) (CostQuest Comments) (attaching, among other things, a white paper by James Stegeman, Dr. Steve Parsons, and Mike Wilson, *The Advanced Services Model: Proposal for a Competitive and Efficient Universal Service High-Cost Approach for a Broadband World* (CostQuest Proposal)).

<sup>73</sup> See CostQuest Proposal at 22-26.

<sup>74</sup> Specifically, we could change the maximum copper loop length, which is currently set at 18,000 feet, to the maximums used in the broadband model (12,000, 5,000, and 3,000 feet), and update other inputs to include the costs of Digital Subscriber Line Access Multiplexers (DSLAMs). We note however, that other inputs also should be updated to reflect current costs.

<sup>75</sup> See *infra* paras. 35-40.

without taking into consideration the role of existing universal service support.<sup>76</sup> For example, if a carrier in a high-cost area uses high-cost support to make voice and broadband available to eighty-five percent of its customers, the National Broadband Plan model estimates the cost of deploying broadband to the remaining fifteen percent, but does not estimate the costs associated with the eighty-five percent that already have access to broadband. The National Broadband Plan model does not estimate forward-looking economic costs in areas with existing broadband networks and, thus, provides no means of objectively evaluating whether current high-cost support levels are efficient, or how much support would be necessary to maintain broadband and voice services in areas currently receiving high-cost support. Nor does the National Broadband Plan model take into account any universal service support that carriers may currently receive for providing supported telephony services, whether or not they provide broadband.

34. The Commission's forward-looking cost model that is used to determine support for non-rural carriers estimates the total local exchange network costs of providing telephone service to all households and businesses within a geographic area. We seek comment on whether, if the Commission replaces its current high-cost funding mechanism with a new Connect America Fund to support both broadband and voice service, the Commission should adopt a total cost rather than an incremental cost model.

### (iii) Cost vs. Cost and Revenue

35. We seek comment on whether the Commission should consider revenues, as well as costs, in determining CAF support. The Commission's current forward-looking cost model used to determine support levels for voice telephony for non-rural carriers estimates only costs, not revenues.<sup>77</sup> In contrast, the National Broadband Plan model, in addition to estimating the incremental costs of deploying broadband in unserved areas, estimates the expected incremental revenue from the new customers and services resulting from the new broadband build-out.<sup>78</sup>

36. The National Broadband Plan recommends that support should be based on the net gap, i.e., forward-looking costs less revenues and that "[r]evenues should include all revenues earned from broadband-capable network infrastructure, including voice, data and video revenues, and take into account the impact of other regulatory reforms that may impact revenue flows, such as ICC [intercarrier compensation], and funding from other sources, such as Recovery Act grants."<sup>79</sup> Because "[s]imply calculating the incremental costs of deploying broadband is not enough to determine the Broadband Investment Gap necessary to encourage operators to deploy," the National Broadband Plan model estimates "the amount of support necessary to cause the networks' economics to not only be positive, but to be sufficiently positive to motivate investment given capital scarcity and returns offered by alternative investments."<sup>80</sup>

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<sup>76</sup> OBI, The Broadband Availability Gap at 35 ("One issue with this approach is that it assumes that existing networks will be available on an ongoing basis. To the extent that existing networks depend on public support, such as USF disbursements, the total gap for providing service in unserved areas could be significantly higher than the incremental calculation indicates.").

<sup>77</sup> None of the current high-cost support mechanisms consider expected revenues, except in the limited circumstances when subscriber line charge (SLC) revenues are imputed for purposes of calculating interstate common line support (ICLS). For example, high-cost loop support and local switching support are based on embedded costs without regard to revenues.

<sup>78</sup> OBI, The Broadband Availability Gap at 34-35, 45-50.

<sup>79</sup> National Broadband Plan at 145 (footnotes omitted).

<sup>80</sup> OBI, The Broadband Availability Gap at 33. Two key principles underlying the OBI model's design are that "[o]nly profitable business cases will induce incremental network investments" and that "[i]nvestment decisions are made on the incremental value they generate." *Id.*

37. We seek comment on whether to take into account the revenues earned from all services provided over broadband networks in calculating support under the CAF, such as broadband and video revenues, as opposed to basing support only on costs. If we include video revenues, should we also take into account costs associated with the provision of video services, such as programming costs? We seek comment on potential methods for estimating revenues and what revenues should be included, if the Commission were to consider revenues, as well as costs, in determining CAF support. We recognize that different services may be available in different parts of the country, and prices may vary in different areas. We also recognize that take rates for various services may vary depending upon a number of demographic factors. For example, the National Broadband Plan model uses demographic factors to estimate broadband adoption rates at the census block level.<sup>81</sup> What information should the Commission use in order to take into account revenues in determining support levels?

38. If the Commission were to include revenues in a model to determine broadband support, we seek comment on the methodology that the National Broadband Plan model uses to estimate incremental revenues. Incremental revenue in the National Broadband Plan model is the product of two main components: the number of incremental customers and the average revenue per user (ARPU).<sup>82</sup> The Commission staff analysis recognizes that some key assumptions on which the model is based may have a “disproportionately large” impact on the size of the investment gap.<sup>83</sup> Two of these major assumptions relate to the revenue calculation: “[t]he take rate for broadband in unserved areas will be comparable to the take rate in served areas with similar demographics;” and “[t]he average revenue per product or bundle will evolve slowly over time.”<sup>84</sup> To estimate broadband adoption rates, Commission staff used broadband-adoption survey data that broke out responses by various demographic factors and a widely accepted technology adoption mathematical model to develop take rates for every census block in the nation.<sup>85</sup> These census block penetration rates were then scaled to estimate the take rate of related services (voice, video), the effect of bundled services, and the stratification of tiering (basic vs. premium).<sup>86</sup> To develop an approximation for ARPU, Commission staff estimated an individual ARPU value for each product category (data, voice, and video), as well as an ARPU value for the product bundle, and a low and high version of the data, voice, video and bundle product categories to reflect customer segmentation.<sup>87</sup>

39. We seek comment on the time frame within which any model can be expected reliably to forecast expected revenues. The National Broadband Plan model calculates the NPV of cash flows over 20 years. A forward-looking cost model estimates the costs of technologies currently being deployed and reasonably accurate input values can be developed by looking at current costs and equipment lifetimes.

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<sup>81</sup> The OBI analysis assumes, however, that the take rate for broadband in unserved areas will be the same as in served areas with similar demographics. See *infra* para. 38.

<sup>82</sup> OBI, The Broadband Availability Gap at 35. The number of incremental customers is based on the technology modeled so that revenues are not double counted. For example, if the model calculates the costs of shortening loop lengths to deliver data and video services, only incremental data and video related revenue would be considered; voice revenues would not be included. *Id.*

<sup>83</sup> *Id.* at 42.

<sup>84</sup> *Id.*

<sup>85</sup> See *id.* at 45-50. The demographic variables used in the National Broadband Plan model that were positively correlated with broadband adoption were: income greater than \$100,000; income between \$75,000 – \$100,000; college degree or greater education. Those that were negatively correlated were: less than high school education; senior citizen (65+); rural; and high school degree only. *Id.* at 45.

<sup>86</sup> See *id.* at 48-49..

<sup>87</sup> See *id.* at 50-51 & Exhibit 3-V.



The Commission staff estimate of revenues is primarily based on current prices and forecasts, although the revenue attributed to incremental voice revenue for telephone companies is set equal to the ARPU for a similar cable Voice over Internet Protocol (VoIP) product to account for recent market trends. How often should a revenue model be updated to reflect changes in prices and market trends? If calculations are made for a shorter time period, how should the model account for the residual value of assets whose lifetimes are longer than the study period (e.g., how does one account for the residual value of fiber in a ten-year study)?

40. The National Broadband Plan model uses 11.25% as the discount rate, identifies the expected cash flows associated with building and operating a network over the project's lifetime of 20 years, and computes the net present value of those cash flows.<sup>88</sup> We seek comment on whether this is an appropriate approach for purposes of determining CAF support amounts. We also seek comment more generally on how often key model inputs should be updated.

**d. Geographic Areas**

41. The National Broadband Plan model initially estimates the incremental costs of deploying broadband to unserved areas and the incremental revenues associated with that deployment at a very granular geographic level, the census block.<sup>89</sup> Commission staff reasoned that using the average cost per household of existing deployments, even if adjusted for differences in population density, would risk underestimating costs because unserved areas tend to have much lower densities than the country overall.<sup>90</sup> Although geographic granularity is important in capturing the real costs associated with providing broadband service in rural and remote areas, Commission staff concluded that it does not make sense to evaluate whether to build a network at the census block level.<sup>91</sup> In the real world, private sector firms typically will evaluate the profitability of deployment decisions at a larger, more aggregated service-area level than a census block.<sup>92</sup> Commission staff concluded that estimating lowest-cost technologies on a census block basis could lead to an unrealistic patchwork quilt of different technologies in contiguous census blocks and aggregated financial outputs to the county level. Thus, the National Broadband Plan model estimates the amount of additional funding required to close the broadband availability gap by assessing the gap of various technologies at the county level.<sup>93</sup>

42. We seek comment on what geographic area the Commission should use in calculating the cost of deploying a network and providing services, and on whether the Commission should use neutral geographic units, as recommended in the National Broadband Plan.<sup>94</sup> We seek comment on the advantages and disadvantages of using a particular geographic area to determine either the costs or the gap between costs and revenues. As Commission staff explains, if the geography is too big, there will be portions that would be more efficiently (less expensively) served by an alternate technology, but if the

<sup>88</sup> OBI, *The Broadband Availability Gap* at 33.

<sup>89</sup> One of the key principles underlying the model's design is: "Capturing the local (dis-)economies of scale that drive local profitability requires granular calculations of costs and revenues." *Id.*

<sup>90</sup> *Id.* at 38; *see also id.* at 8-9 & Exhibits 1-E, 1-F.

<sup>91</sup> *Id.* at 36.

<sup>92</sup> Another key principle underlying the model's design is: "Network-deployment decisions reflect service-area economies of scale." *Id.* at 35.

<sup>93</sup> *Id.* at 37.

<sup>94</sup> *See* National Broadband Plan at 145 ("The FCC should evaluate eligibility and define support levels on the basis of neutral geographic units such as U.S. Census-based geographic areas, not the geographic units associated with any particular industry segment.").

geography is too small it will be subscale, thereby leading to more inefficiency and higher costs (and support levels). The National Broadband Plan model uses counties because they “appear large enough in most cases to provide the scale benefits but not so large as to inhibit the deployment of the most cost-effective technology,” while remaining technology neutral.<sup>95</sup> We seek comment on whether this is a workable approach for future CAF universal service funding decisions.

## **2. Expedited Process for Providing Funding to Extend Networks in Unserved Areas**

43. We believe that it is critical to constrain growth in the legacy high-cost support mechanisms while we develop rules for a more efficient and accountable universal service funding mechanism. At the same time, we recognize that firms today are upgrading and modernizing their networks to offer a wide array of new services to consumers. The National Broadband Plan recommends that the Commission “create a fast-track program in CAF for providers to receive targeted funding for new broadband construction in unserved areas.”<sup>96</sup> Such funding could, for instance, be provided to areas identified as “unserved” once the Broadband Data Improvement Act mapping is completed in February 2011.<sup>97</sup> We seek comment on the best way to create an accelerated process to distribute funding to support new deployment of broadband-capable networks in unserved areas during the period we are considering final rules to implement fully the new CAF funding mechanism. In particular, we seek comment on whether there is an efficient method for delivering a set amount of support, which does not require the use of a model.

44. For example, shortly after passage of the American Recovery and Reinvestment Act,<sup>98</sup> a group of economists recommended that a competitive procurement auction be used to allocate funding under the Recovery Act.<sup>99</sup> The group noted that “it is difficult to design a grant application system to ensure that firms receive only the minimum subsidy necessary to achieve the goal.”<sup>100</sup> They argued that

<sup>95</sup> OBI, *The Broadband Availability Gap* at 37.

<sup>96</sup> National Broadband Plan at 144.

<sup>97</sup> See Broadband Data Improvement Act of 2008, Pub. L. No. 110-385, 122 Stat. 4096 (codified at 47 U.S.C. §§ 1301-1304) (BDIA). On July 2, 2009, the National Telecommunications Information Agency (NTIA) released a Notice of Funding Availability (NOFA), which defined several key terms for the purposes of the state broadband program. Department of Commerce, National Telecommunications and Information Administration, State Broadband Data and Development Grant Program, Docket No. 0660-ZA29, Notice of Funds Availability, 74 Fed. Reg. 32545, 32555 (July 8, 2009) (*NTIA State Mapping NOFA*). The NOFA defines “broadband” to include data-transmission technology with advertised speeds of at least 768 kbps downstream and at least 200 kbps upstream to end users. *NTIA State Mapping NOFA*, 74 Fed. Reg. at 32548. An area is “unserved” for purposes of the NOFA if 90% of households in the area lack access to facilities-based terrestrial broadband service. *Id.* NTIA later issued a clarification of the Technical Appendix to the *NTIA State Mapping NOFA*, and provided additional guidance to its implementation of the Program by posting responses to Frequently Asked Questions. See Department of Commerce, National Telecommunications and Information Administration, State Broadband Data and Development Grant Program, Docket No. 0660-ZA29, Notice of Funds Availability; Clarification. 74 Fed. Reg. 40569 (Aug. 12, 2009); NTIA, *State Broadband Data and Development Program (Broadband Mapping Program) Frequently Asked Questions*, <http://www.ntia.doc.gov/broadbandgrants/BroadbandMappingFAQs%20090812.pdf> (rcl. Aug. 12, 2009) (*NTIA Aug. 12 FAQs*).

<sup>98</sup> American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009) (Recovery Act). The Recovery Act was signed into law on February 17, 2009.

<sup>99</sup> Paul Milgrom, Gregory Rosston, Andrzej Skrzypacz & Scott Wallston, “Comments of 61 Concerned Economists: Using Procurement Auctions to Allocate Broadband Stimulus Grants,” (April 13, 2009) (submitted to NTIA and Rural Utilities Service (RUS)) (61 Economists’ Proposal); see Appendix B.

<sup>100</sup> *Id.* at 2.

“[a]n objective, ‘mechanistic’ approach that applies specific, quantitative criteria can be both easier to implement and lead to more efficient outcomes than traditional grant application review.”<sup>101</sup> Among other things, such an approach can “inherently induce firms to contribute their own investment to increase the chance that their bid is accepted.”<sup>102</sup>

45. The procurement auction proposal by this group of economists is similar in many ways to reverse auction proposals that have been previously considered by the Commission. In any reverse auction procedure, it is necessary to establish precise definitions of what parties are asked to bid for, including the geographic boundaries of the areas to be served and a precise definition of the service quality that winning bidders would be expected to provide.<sup>103</sup> The economists’ proposal potentially differs from some reverse auction proposals in that bidding parties themselves would be allowed to specifically define the geographic units and other service characteristics associated with their bids.<sup>104</sup> To select winning proposals from those submitted, it would therefore be necessary to establish a scoring rule such that all proposals could be evaluated on an easily understood and unambiguous basis. Such a mechanism could be implemented relatively quickly without addressing the full complexities inherent in other reverse auction proposals. For example, it would not require the development of a cost or cost and revenue model to set reserve prices. In addition, it would minimize the potential problem with reverse auctions concerning few bidders in a specific area, because proposals for different areas would compete against each other. Thus, all bids for all unserved areas in the United States would be competing for a limited, defined amount of funding. There are limitations with such an approach, however. For instance, because this approach involves one-time grants, it does not appear suitable for areas where operating costs exceed revenues and thus where continuing support is required.

46. The National Broadband Plan concluded that “[i]n some areas, subsidizing all or part of the initial capex will allow a service provider to have a sustainable business. Elsewhere, subsidizing initial capex will not be enough; service providers will need support for continuing costs.”<sup>105</sup> Based on available information, Commission staff estimated that “[s]upport for one-time deployment or upgrades will likely be enough to provide broadband to 46% of the seven million unserved housing units.”<sup>106</sup> The National Broadband Plan stated that “USF resources are finite, and policymakers need to weigh tradeoffs in allocating those resources . . .” and recommended as a guiding principle that policymakers should seek to “maximize the number of households that are served by broadband meeting the National Broadband Availability Target.”<sup>107</sup> If the Commission has a finite amount of funding available in a given year to support the new deployment of broadband-capable networks, could a competitive procurement auction be used to maximize the number of households that would gain access to broadband?

47. We seek comment on whether some form of competitive procurement auction could be an efficient mechanism to determine subsidies for the extension of new broadband-capable infrastructure in unserved areas. For instance, could such a competitive process be used to target one-time subsidies to extend broadband-capable networks in areas where revenues are likely to be sufficient to cover ongoing

<sup>101</sup> *Id.* at 3.

<sup>102</sup> *Id.* at 4.

<sup>103</sup> For example, build-out requirements and minimum speed and other quality standards would be pre-specified.

<sup>104</sup> Some reverse auction proposals have suggested a package bidding format based on pre-defined geographic units such as counties. Under the economists’ proposal, bidders would be allowed to propose arbitrary geographic units based on their own business models.

<sup>105</sup> National Broadband Plan at 138.

<sup>106</sup> *Id.*

<sup>107</sup> *Id.* at 143.

costs of operation?<sup>108</sup> We also seek comment on the appropriate scoring function to use if a procurement auction mechanism is adopted for this purpose. The economists' proposals suggests that "[t]his could be a simple metric, such as 'newly served population' (defined as the population to which service above a minimum bandwidth threshold is newly available) or a more involved measure such as 'effective bandwidth supplied' (defined as the population to which service is newly available adjusted for the speed of service)."<sup>109</sup> One important aspect of a scoring rule is the set of weights used to evaluate new service to unserved areas based on perceived cost or customer density. For example, a simple rule that ranks proposals based on the minimum subsidy required per newly served household would tend to favor proposals to serve relatively low cost regions. We invite specific comments on rules that could be used to evaluate proposals to provide differing speeds of access in excess of 4 Mbps actual download and 1 Mbps actual upload, or differing qualities of access.

48. Parties are also invited to comment specifically on any other aspects of the procurement auction mechanism outlined in the economists' proposal, including build-out requirements and compliance and auditing features. For instance, what would be an appropriate time frame in which the winning bidder must make the required investment? What percentage of the winning bid should be provided before construction begins, and what conditions must a recipient meet before remaining installments are paid? What certifications regarding performance should be made, and how should the Commission verify that conditions have been satisfactorily met?

### III. NOTICE OF PROPOSED RULEMAKING

#### A. Background

49. The Commission has acknowledged the benefits of comprehensive reform of the current high-cost mechanisms.<sup>110</sup> Indeed, the Joint Statement on Broadband recommends that the universal service fund and the intercarrier compensation system "be comprehensively reformed to increase accountability and efficiency, encourage targeted investment in broadband infrastructure, and emphasize the importance of broadband to the future of these programs."<sup>111</sup> The National Broadband Plan recommends significant changes to the current high-cost program, and this notice of proposed rulemaking

<sup>108</sup> By "one-time" we refer to a fixed amount of subsidy that could be paid in installments.

<sup>109</sup> 61 Economists' Proposal, at 5-6; see Appendix B.

<sup>110</sup> See, e.g., *High-Cost Universal Service Support, Federal-State Joint Board on Universal Service*, WC Docket No. 05-337, CC Docket No. 96-45, Notice of Proposed Rulemaking, 23 FCC Rcd 1467 (2008) (*Identical Support Rule Notice*); *High-Cost Universal Service Support, Federal-State Joint Board on Universal Service*, WC Docket No. 05-337, CC Docket No. 96-45, Notice of Proposed Rulemaking, 23 FCC Rcd 1495 (2008) (*Reverse Auctions Notice*); *High-Cost Universal Service Support, Federal-State Joint Board on Universal Service*, WC Docket No. 05-337, CC Docket No. 96-45, Notice of Proposed Rulemaking, 23 FCC Rcd 1531 (2008) (*Joint Board Comprehensive Reform Notice*); *High-Cost Universal Service Reform, Federal-State Joint Board on Universal Service; Lifeline and Link Up; Universal Service Contribution Methodology; Numbering Resource Optimization; Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Developing a Unified Intercarrier Compensation Regime; Intercarrier Compensation for ISP-Bound Traffic; IP-Enabled Services*, CC Docket Nos. 96-45, 99-200, 96-98, 01-92, 99-68, WC Docket Nos. 05-337, 03-109, 06-122, 04-36, Order on Remand and Report and Order and Further Notice of Proposed Rulemaking, 24 FCC 6475 (2008) (*Comprehensive Reform FNPRM*), *aff'd* *Core Communications, Inc. v. FCC*, 592 F.3d 139 (D.C. Cir. 2010).

<sup>111</sup> *Joint Statement on Broadband*, GN Docket No. 10-66, Joint Statement on Broadband, FCC 10-42, para 3 (rel. Mar. 16, 2010) (*Joint Statement on Broadband*).

(NPRM) represents an important first step in seeking public comment on the roadmap to universal access to broadband.<sup>112</sup>

50. The National Broadband Plan recommends that the Commission cut inefficient funding of legacy voice service and refocus universal service funding to directly support modern communications networks that will provide broadband as well as voice services.<sup>113</sup> In this NPRM, we propose to contain growth in legacy high-cost support mechanisms as a critical first step to transitioning to a more efficient and accountable funding mechanism, recognizing that consumers across America ultimately pay for universal service. We propose specific reforms to the legacy high-cost program that could be initially implemented to create a pathway to a more efficient and targeted mechanism for funding broadband. We seek comment on these proposals. We encourage input from everyone. We are particularly interested in input from Tribal governments on these specific proposals, and we specifically ask whether there are any unique circumstances in Tribal lands that would necessitate a different approach. Similarly, we request comment on whether there are any unique circumstances in insular areas that would necessitate a different approach.

## **B. Discussion**

### **1. Controlling the Size of the High-Cost Program**

51. As an essential first step toward repurposing the universal service fund to support broadband as well as voice service, we must ensure that the size of the fund remains reasonable. The National Broadband Plan recommends that the Commission take steps to manage the universal service fund so that its total size remains close to its current level (in 2010 dollars) to minimize the burden of increasing universal service contributions on consumers.<sup>114</sup> The Commission already has taken action to control the overall size of the high-cost fund. In 2008, the Commission adopted on an interim basis an overall competitive ETC high-cost cap of approximately \$1.4 billion, pending comprehensive USF reform.<sup>115</sup> Similarly, today we seek comment on capping legacy high-cost support provided to incumbent telephone companies at 2010 levels, which would have the effect of creating an overall ceiling for the legacy high-cost program.<sup>116</sup> Such a cap would remain in place while the Commission determines how to distribute funds in a more efficient, targeted manner to those areas of the country where no firm can operate profitably without government support, while minimizing burdens on American consumers who ultimately pay for universal service through carrier pass-through charges.

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<sup>112</sup> The American Recovery and Reinvestment Act of 2009 required the Commission to deliver a National Broadband Plan to Congress. See Pub. L. No. 111-5, 123 Stat. 115 (2009). The Commission delivered the National Broadband Plan to Congress on March 16, 2010. *FCC Sends National Broadband Plan to Congress*, FCC News Release (dated Mar. 16, 2010). Federal Communications Commission, *Connecting America: The National Broadband Plan*, Ch. 8 (rel. March 16, 2010) (*National Broadband Plan*).

<sup>113</sup> *National Broadband Plan* at 147-48.

<sup>114</sup> *National Broadband Plan* at 149.

<sup>115</sup> *High-Cost Universal Service Support; Federal-State Joint Board on Universal Service*, WC Docket No. 05-337, CC Docket No. 96-45, Order, 23 FCC Rcd 8834 (2008), *aff'd*, *Rural Cellular Ass'n v. FCC*, 588 F.3d 1095 (D.C. Cir. 2009). The Commission adopted a limited exception to the cap for competitive ETCs serving tribal lands or Alaska Native regions.

<sup>116</sup> In 2007, the Federal-State Joint Board on Universal Service recommended an overall cap for the high-cost support mechanisms and a transition in which existing funding mechanisms would be reduced, and all, or a significant share, of savings transferred to proposed new funds for broadband and mobility. *High-Cost Universal Service Support; Federal-State Joint Board on Universal Service*, WC Docket No. 05-337, CC Docket No. 96-45, Recommended Decision, 22 FCC Rcd 20477, 20484, paras. 26-27 (Fed.-State Jt. Bd. 2007).

52. We seek comment on how the Commission could implement such a cap. Alternatively, we invite other proposals that would ensure that the overall size of the high-cost fund stays at or below current levels. Should the Commission impose an overall cap on legacy high-cost support for incumbent LECs at 2010 levels? Should the Commission impose a cap on each individual high-cost mechanism (to the extent each is not already capped) at 2010 levels? Should the Commission freeze per-line support for each carrier at 2010 levels? For example, the Alliance for Rural CMRS Carriers proposed that incumbent LEC support amounts per line be capped at either March 2008 or March 2010 levels.<sup>117</sup> We seek comment on this proposal. Alternatively, should the Commission freeze the total amount of support a carrier receives in a particular study area at 2010 levels? Are there other ways to implement such a cap? What rule changes would be required to implement this proposal? How would the Commission implement this proposal in conjunction with the reforms identified in the following paragraphs? In addition, what implications would this proposal have for other Commission rules, such as the Commission's current pricing rules, and should the implementation of this proposal be coordinated with any other regulatory actions?

## 2. Specific Steps to Cut Legacy High-Cost Support

53. As discussed in more detail below, the National Broadband Plan identifies several specific first steps that could reduce funding in the legacy high-cost support mechanisms and recommends that those savings be used to further the goals of universalizing broadband without increasing the overall size of the universal service fund. The National Broadband Plan recognizes that shifting funds could have transitional impacts and recommends that "[a]s the FCC considers this policy shift, it should take into account the impact of potential changes in free cash flows on providers' ability to continue to provide voice service and on future broadband network deployment strategies."<sup>118</sup> Below, we seek comment on the first steps set forth in the National Broadband Plan. To the extent that any commenter believes that these proposals, or the proposal to cap legacy high-cost support, would negatively affect affordable voice service for consumers today, we would encourage such a commenter to identify all assumptions and to provide data, including information on network investment plans over the next five years and free cash flows, to support that position. The intent of these proposals is to eliminate the indirect funding of broadband-capable networks today through our legacy high-cost programs,<sup>119</sup> which is occurring without transparency or accountability for the use of funds to extend broadband service. We seek comment on the timing of implementing such reforms in conjunction with the creation of a more efficient and targeted

<sup>117</sup> See Letter from David LaFuria, Counsel for Alliance for Rural CMRS Carriers, to Marlene H. Dortch, Secretary, FCC, CC Docket No. 96-45, WC Docket No. 05-337, GN Docket No. 09-47, 09-51, 09-137 (Mar. 3, 2010) (urging the FCC to adopt an interim cap for incumbent telephone company support per line at either March 2010 or March 2008 levels, pending comprehensive USF reform). Specifically, the Alliance for Rural CMRS Carriers propose that: 1) ILECs would receive the amount of per-line support they are eligible to receive as of the effective date of the cap (either March 2008 or March 2010) until comprehensive reform of the federal universal service support mechanism is implemented; 2) Beginning on the date that the interim plan commences, ILEC support would be calculated each quarter by simply determining whether an ILEC's support has increased on a per-line basis since the effective date of the cap (either March 2008 or March 2010); 3) If an ILEC's per-line support has increased, support would be determined by multiplying the current number of access lines in service by the capped per-line amount; 4) If the ILEC's per-line support has decreased, then it will receive its support without any adjustments.

<sup>118</sup> National Broadband Plan at 147.

<sup>119</sup> Under the Commission's so-called "no barriers" policy, high-cost support for voice services indirectly supports the deployment of broadband capable networks. See *Rural Task Force Order*, 16 FCC Rcd at 11322, para. 200 ("The public switched telephone network is not a single-use network. Modern network infrastructure can provide access not only to voice services, but also to data, graphics, video, and other services. . . . Thus, although the high-cost loop support mechanism does not support the provision of advanced services, our policies do not impede the deployment of modern plant capable of providing access to advanced services.").

framework that will provide support for broadband and voice. We encourage commenters to address when each rule change should be implemented and how specific reforms should be sequenced to provide regulatory clarity for ongoing private sector investment.

54. In addition, we seek comment on the relationship between such universal service reforms and carriers' rates, including intercarrier compensation rates, under the Commission's current pricing rules.<sup>120</sup> We seek comment both on the likely rate impacts under existing pricing rules that would arise from the possible universal service reforms and any appropriate responses. We also note that many rural rate-of-return carriers participate in the National Exchange Carrier Association (NECA) pooling process for their interstate access charges. If universal service support under the legacy programs were frozen for such carriers, are there special considerations resulting from operation of the NECA pool that would unfairly advantage or disadvantage certain carriers? The Commission previously has expressed concern about the risks of continued participation in NECA pools by carriers that were subject to incentive regulation.<sup>121</sup> We seek comment on whether such concerns would remain if all rate-of-return carriers converted to incentive regulation. Would the pool be able to continue to operate pursuant to regulation other than rate-of-return?

55. Shifting Rate-of-Return Carriers to Incentive Regulation. The National Broadband Plan recommends that the Commission "require rate-of-return carriers to move to incentive regulation."<sup>122</sup> We seek comment on requiring current rate-of-return companies to convert to some form of incentive regulation. We note that a number of companies have voluntarily converted to price cap regulation in the last two years.<sup>123</sup> In such cases, the Commission effectively converted the companies' interstate common

<sup>120</sup> For example, under the Commission's existing price cap rules, if a carrier no longer received IAS support to help meet its revenue requirement for particular regulated services, it could recover those revenues through new intercarrier compensation charges if its subscriber line charge (SLC) was at the applicable cap. 47 C.F.R. §§ 69.153 (presubscribed interexchange carrier charge), 69.154 (per-minute carrier common line charge). If the carrier's SLC was not at the applicable cap, the carriers likely could seek an exogenous cost adjustment, resulting first in an increase in the SLC, and only then in new intercarrier compensation charges, to the extent that additional cost recovery was necessary.

As another example, under the Commission's price cap rules, price cap carriers are allowed to increase their price cap indices if their earnings fall below 10.25%. 47 C.F.R. § 61.45(d)(1)(vii). Price cap carriers forego this right, however, if they avail themselves of "pricing flexibility" regulatory relief. 47 C.F.R. § 69.731.

<sup>121</sup> *Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers, Federal-State Joint Board on Universal Service*, CC Docket Nos. 96-45, 00-256, Report and Order and Second Further Notice of Proposed Rulemaking, 19 FCC Rcd 4122, 4163, para. 91 (2004) (*MAG Second Further Notice*).

<sup>122</sup> National Broadband Plan at 147.

<sup>123</sup> A number of the mid-sized telephone companies recently have elected to convert to price-cap regulation. See *Windstream Petition for Conversion to Price Cap Regulation and for Limited Waiver Relief*, WC Docket No. 07-171, Order, 23 FCC Rcd 5294 (2008) (*Windstream Order*); *Petition of Puerto Rico Telephone Company, Inc. for Election of Price Cap Regulation and Limited Waiver of Pricing and Universal Service Rules; Consolidated Communications Petition for Conversion to Price Cap Regulation and for Limited Waiver Relief; Frontier Petition for Limited Waiver Relief upon Conversion of Global Valley Networks, Inc., to Price Cap Regulation*, WC Docket Nos. 07-292, 07-291, 08-18, Order, 23 FCC Rcd 7353 (Wireline Comp. Bur. 2008); *ACS of Alaska, Inc., ACS of Anchorage, Inc., ACS of Fairbanks, Inc. and ACS of the Northland, Inc., Petition for Conversion to Price Cap Regulation and Limited Waiver Relief*, WC Docket No. 08-220, Order, 24 FCC Rcd 4664 (Wireline Comp. Bur. 2009); *CenturyTel, Inc., Petition for Conversion to Price Cap Regulation and for Limited Waiver Relief*, WC Docket No. 08-191, Order, 24 FCC Rcd 4677 (Wireline Comp. Bur. 2009). See also, e.g., *Pleading Cycle Established for Comments on Vitelco Petition for Conversion to Price Cap Regulation and Other Limited Waiver Relief*, WC Docket No. 10-39, Public Notice, DA 10-272 (rel. Feb. 18, 2010); *Pleading Cycle Established for* (continued....)

line support (ICLS) to a frozen amount per line. We seek comment on whether the Commission should replace rate-of-return regulation with the price-cap framework recently adopted for voluntary conversions,<sup>124</sup> an alternative price-cap framework, or some other form of incentive regulation.<sup>125</sup> We seek comment on the costs and the benefits that would be realized by converting all rate-of-return carriers to price cap regulation or other incentive regulation. We seek comment on whether, in an increasingly competitive marketplace, and with carriers' service offerings expanding beyond regulated services, the current rate-of-return framework, which considers only regulated costs and revenues, has become less appropriate.

56. We seek comment on whether we should convert ICLS to a frozen amount per line, which would have the effect of limiting growth in the legacy high-cost program.<sup>126</sup> We seek comment on whether this reform should be implemented at the same time as any measures the Commission may adopt to provide targeted funding for the deployment of broadband-capable infrastructure to areas that are unserved, or should such a rule change occur before the development of the CAF, or otherwise be coordinated with some other regulatory action such as conversion to incentive regulation. The National Broadband Plan recognizes that the savings realized by eliminating future growth in the legacy ICLS program represent funding that could be redirected toward achieving broadband-related goals.<sup>127</sup> We seek comment on this proposal.

57. Elimination of Interstate Access Support. The National Broadband Plan also recommends that the Commission "redirect access replacement funding known as Interstate Access Support (IAS) toward broadband deployment."<sup>128</sup> Thus, we now seek comment on the elimination of interstate access support (IAS). When the Commission created IAS in 2000, it said that it would revisit

(Continued from previous page)

*Comments on FairPoint Petition for Conversion to Price Cap Regulation and for Other Limited Waiver Relief*, WC Docket No. 10-47, Public Notice, DA 10-299 (rel. Feb. 25, 2010); *Pleading Cycle Established for Comments on Windstream Petition for Limited Waiver Relief*, WC Docket No. 10-55, Public Notice, DA 10-397 (rel. Mar. 9, 2010).

<sup>124</sup> In the *Windstream Order*, the Commission directed Windstream to establish initial price cap indexes for its price cap baskets using January 1st rates for the year of conversion and base period demand for the calendar year immediately prior to the conversion. The Commission required Windstream to target its average traffic-sensitive (ATS) rate to \$0.0065 per ATS minute of use pursuant to section 61.3(qq) of the Commission's rules, using an X-factor of 6.5 percent. Finally, the Commission granted Windstream a waiver to allow it to continue to receive ICLS for the converted study areas. Windstream was required to forego any recovery of a presubscribed interexchange carrier charge or carrier common line charge and forego assessing a \$7.00 non-primary residential line subscriber line charge in conjunction with its receipt of frozen per-line ICLS. *See generally, Windstream Order*, 23 FCC Rcd 5294.

<sup>125</sup> The Commission has sought comment in the past on other alternative incentive regulation schemes, and whether they might be appropriate for rate-of-return carriers. *See, e.g., MAG Second Further Notice*, 19 FCC Rcd at 4153-64, paras. 68-94.

<sup>126</sup> Specifically, in the *Windstream Order*, the Commission required that Windstream's per-line ICLS be calculated at the preceding calendar year per-line disaggregated ICLS amounts, and frozen at those per-line levels going forward, and that its aggregate annual ICLS support be capped at an amount equal to its overall ICLS for the year preceding the conversion (after application of any required true-ups). *Windstream Order*, 23 FCC Rcd at 5302-04, paras. 20-21. As noted above, as a condition of its receipt of frozen per-line ICLS support, Windstream, among other things, committed to forego the recovery of any PICC or CCL charge. *Id.* at 5300-01, para. 14.

<sup>127</sup> National Broadband Plan at 147-148.

<sup>128</sup> *Id.* at 147.



this funding mechanism “to ensure that such funding is sufficient, yet not excessive.”<sup>129</sup> That re-examination has not occurred.

58. Specifically, we now seek comment on eliminating sections 54.800-54.809 of our rules and transferring any IAS funding levels as of the date of elimination to the new Connect America Fund to provide support for broadband-capable networks.<sup>130</sup> We invite commenters to propose an appropriate timeline for the elimination of these rules and any glide-path that may be necessary to ensure that recipients continue to be able to provide voice services during the transition

59. Sprint and Verizon Wireless Voluntary Commitments. The National Broadband Plan also recommends that the Commission “issue an order to implement the voluntary commitments of Sprint and Verizon Wireless to reduce the high-cost funding they receive as competitive eligible telecommunications carriers to zero over a five-year period as a condition of earlier merger decisions.”<sup>131</sup> The Commission will consider shortly an order clarifying how to implement Verizon Wireless’s and Sprint’s voluntary commitments.<sup>132</sup>

60. Elimination of Competitive ETC High-Cost Support. The National Broadband Plan recommends that the Commission phase out remaining competitive ETC funding under the existing funding mechanisms over a five-year period and target the savings toward the deployment of broadband-capable networks and other reforms in the plan.<sup>133</sup> We seek comment on this proposal.

61. We seek comment on whether we should ramp down competitive ETC support under the legacy programs, and if so, how the transition should occur. For example, should the Commission reduce support on a pro rata basis (e.g., 20% reduction each year) for each state? Should the Commission reduce support at an accelerated rate of decline? Should the Commission reduce support on a proportional basis for all states, or in some other manner, and if so, on what basis? Would there be any impact on existing

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<sup>129</sup> *Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Low-Volume Long Distance Users; Federal-State Joint Board on Universal Service*, CC Docket Nos. 96-262, 94-1, 99-249, 96-45, Sixth Report and Order, Report and Order, and Eleventh Report and Order, 15 FCC Rcd 12962, 13047, para. 203 (2000), *aff’d in part, rev’d in part, and remanded in part*, Texas Office of Public Util. Counsel et al. v. FCC, 265 F.3d 313 (5th Cir. 2001); *on remand*, *Access Charge Reform; Price Cap Performance Review for LECs; Low-Volume Long Distance Users; Federal-State Joint Board on Universal Service*, CC Docket Nos. 96-262, 94-1, 99-249, 96-45, Order on Remand, 18 FCC Rcd 14976 (2003).

<sup>130</sup> National Broadband Plan at 147-148.

<sup>131</sup> *Id.* at 147.

<sup>132</sup> Verizon Wireless agreed to a five-year phase-out of its competitive ETC high cost support for any properties that it retained after mandated divestitures. *Applications of Celco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC for Consent to Transfer Control of Licenses, Authorizations, and Spectrum Manager and De Facto Transfer Leasing Arrangements and Petition for Declaratory Ruling that the Transaction is Consistent with Section 310(b)(4) of the Communications Act*, WT Docket No. 08-95, File Nos. 0003463892, et al., ITC-T/C-20080613-00270, et al., ISP-PDR-20080613-00012, Memorandum Opinion and Order and Declaratory Ruling, 23 FCC Rcd 17444, 17529-17532, paras. 192-197 (2008). Similarly, Sprint agreed to a five-year phase-out of its competitive ETC high-cost support as part of its transaction with Clearwire. *Applications of Sprint Nextel Corporation and Clearwire Corporation For Consent to Transfer Control of Licenses, Leases and Authorizations*, WT Docket No. 08-94, File Nos. 0003462540 et al., Memorandum Opinion and Order and Declaratory Ruling, 23 FCC Rcd 17570, 17612, para. 108 (2008). The National Broadband Plan recommended that this recaptured competitive ETC funding be used to implement the recommendations in the plan. National Broadband Plan at 147.

<sup>133</sup> National Broadband Plan at 147-148. Competitive ETC support per line is based on the incumbent telephone company’s support per line. 47 C.F.R. § 54.307. As a consequence, the support a competitive ETC receives is not based on either its costs or the costs of the most efficient technology to support customers in a given area.

subscribers of competitive ETCs if the Commission were to reduce competitive ETC support under the legacy funding mechanisms? How should reductions in legacy high-cost support for all competitive ETCs be coordinated with implementation of Verizon Wireless's and Sprint's voluntary commitments to phase-out legacy high-cost support over a five year period?

62. General Proposals. Commenters are invited to submit other proposals to eliminate or reduce funding levels in the legacy high-cost support mechanisms to transition to efficient funding levels in the Connect America Fund. We encourage parties that submit alternative proposals to identify specific rule changes and quantify the impact of such changes.

#### IV. PROCEDURAL MATTERS

##### A. Initial Regulatory Flexibility Analysis

63. As required by the Regulatory Flexibility Act of 1980, as amended,<sup>134</sup> the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) for this NPRM, of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in this further notice. The IRFA is in Appendix A.<sup>135</sup> Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the NPRM. The Commission will send a copy of the NPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.<sup>136</sup> In addition, the NPRM and IRFA (or summaries thereof) will be published in the Federal Register.<sup>137</sup>

##### B. Paperwork Reduction Act Analysis

64. This document discusses potential new or revised information collection requirements. The reporting requirements, if any, that might be adopted pursuant to this NPRM are too speculative at this time to request comment from the OMB or interested parties under section 3507(d) of the Paperwork Reduction Act.<sup>138</sup> Therefore, if the Commission determines that reporting is required, it will seek comment from the OMB and interested parties prior to any such requirements taking effect.<sup>139</sup> In addition, pursuant to the Small Business Paperwork Relief Act of 2002, we will seek specific comment on how we might "further reduce the information collection burden for small business concerns with fewer than 25 employees."<sup>140</sup> Nevertheless, interested parties are encouraged to comment on whether any new or revised information collection is necessary, and if so, how the Commission might minimize the burden of any such collection.

##### C. Ex Parte Presentations

65. These matters shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.<sup>141</sup> Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations

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<sup>134</sup> 5 U.S.C. § 603.

<sup>135</sup> See Appendix A.

<sup>136</sup> See 5 U.S.C. § 603(a).

<sup>137</sup> *Id.*

<sup>138</sup> See 44 U.S.C. § 3507(d).

<sup>139</sup> Paperwork Reduction Act of 1995, Pub. L. No. 104-13, 109 Stat. 163 (1995).

<sup>140</sup> Small Business Paperwork Relief Act of 2002, Pub. L. No. 107-198, 116 Stat. 729 (2002); 44 U.S.C. § 3506(c)(4).

<sup>141</sup> 47 C.F.R. §§ 1.1200-1.1216.